RJR-RJV
ADP File

20 February 1969

MEMORANDUM FOR THE RECORD

SUBJECT: Meeting of the Automap Data Bank Study Group, 19 February 1969

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1. The fifth meeting of the group occurred on 19 February 1969 with [redacted] attending. This was the first of the working sessions, the tasks of which are to define exactly what is needed in the eventual system. This problem can be broken down into four subject areas--- input, storage, retrieval, and output. As is usual in systems studies, the group began with the product or output end. This was examined in terms of map coverage, purpose, and itemized requirements for the future development.

2. Map coverage was related to the various data banks and output features in the form of a chart. The purpose of the exercise was to show the overlap in the data banks and the complexity of the features needed for the various areas covered. Before compiling the chart, a consensus was reached that the names "Small Scale" and "Page-Size" data banks were inprecise and generally unsatisfactory. Roman numerals were recommended as a substitute. The proposed descriptions are as follows:

Data Bank I (ex-Small Scale)

83,000 coordinate points used to plot at scales 1:10,000,000 and smaller. Includes coastlines, class 1 islands and lakes, classes 1 and 2 boundaries.

Data Bank II (ex-Page-Size)

2,000,000 plus coordinate points used to plot at scales from 1:2,000,000 to 1:10,000,000. Includes coastlines, classes 1 and 2 boundaries, and classes 1, 2, and 3 islands, lakes, rivers, and canals.

Data Bank III (hypothetical)

Unknown size bank designed to plot at scales from 1:500,000 to 1:6,000,000. Will include all classes of coastlines, boundaries, islands, lakes, rivers,

canals, roads, railroads, pipelines, and metropolitan area limits. Please note that the need for a third data bank is unresolved. Data Bank II in expanded form may suffice to produce standard base and locale maps.

The classes mentioned above and below refer to the hierarchal or subfeature field (Scale) found in the Automap Index. In brief, all coastlines, islands, lakes, rivers, and canals are divided into Class 1 appearing on all maps, Class 2 on scales 1:15,000,000 and larger, Class 3 on scales 1:5,000,000 and larger, and Class 4 on scales 1:1,000,000 and larger. Class 1 boundaries are international, Class 2 disputed international, and Classes 3 through 9 are all others. Road, railroad, and pipeline classes refer to types and status of feature. The following comparison chart based on coverage was compiled.

		Required Output Features					
Coverage	Source Bank	coastlines/ cities	boundaries	islands/ lakes	rivers/ canals	roads/ railroads/ pipelines	metro limits
World	I	all	1-2	1	none	none	none
Hemisphere	I	all	1-2	1	none	none	none
Continent	I/II	all	1-2	1	1	all	none
Region	II	all	1-2	1-3	1-3	all	none
Country Page	II	all	1-2	1-3	1-3	all	none
Country Standard	III	all	all	all	all	all	all
Locale	III	all	all	all	all	all	all

In addition to the output features listed above, the following options found in the CAM program would be common to all coverages:

various projections	characters
azimuths	symbols
circles	registration marks
range rings	right or wrong reading image
spirals	center offset

Much discussion centered on the city file. At the present time this consists of a number of independent card decks that are added to the plot run when needed. They are variously ordered according to strategic significance, administrative function, population, and spatial

dispersion. However, the need also exists to extract any city for any map irrespective of coverage. The city files in the future, therefore, will have to be integrated with all the source banks and permit retrieval of either a designated group of cities or a single specified city. This item will be taken up again. Another topic for future discussion will be the size of Data Banks II and III. In consultation with the OER statistics unit, the undersigned will undertake sampling to arrive at meaningful projections.

3. The purpose of the map is significant in understanding output needs. To better acquaint the non-cartographers on our panel with the individual characteristics of the different types of maps generated, the following table of approximations was prepared:

Type	Annual Production	Execution & Deadline	Detail	Line Quality
Base	hundreds	months	great	highest
Thematic (current intell)	thousands	hours	minimum	highest*
Thematic (non-current intell)	thousands	weeks	medium	highest
Nomograph	tens	days/weeks	medium	highest
Analytical	hundreds	days	minimum	poorer
Cartogram	tens	days	minimum	highest
Presentation Maps	hundreds	days	minimum	highest

*Exception was taken to this evaluation. While the highest line quality is desired, a lower standard is believed to be the rule.

The relative amount of effort expended on the different map types was cited as probably over half of the total going to base maps, over a third for thematic, a tenth for presentation, and analytical, cartograms and nomographs splitting the remainder. The impact of automation was discussed. Initially, Automap provided the Agency a capability in analytical maps and nomographs where none existed before. Current intelligence thematic and presentation maps next benefited and more recently base and other thematic maps have begun to utilize Automap.

4. Previous sessions have heard requests for different automated output capabilities. They are listed here along with comments on feasibility and priority where applicable.

a. Neatline-Border - Not difficult and partially in CAM already. High priority.

b. Bar Scale - Feasible.

c. Plot Instructions - Feasible.

d. Tapered Rivers - Feasible but more difficult than above three items.

e. Solid Fill or Patterned Areas - Unknown feasibility. For output devices other than the plotter in pen or scribe mode.

f. Type - A major long-term project. Feasibility demonstrated for devices other than the plotter in pen or scribe mode.

g. Terrain - Unknown feasibility. Probably a long-term hardware-oriented project.

The above items would be required to complete automation of the map product. While each would be desirable, it is recognized that the acquisition of any or all capabilities represents an investment that must be weighed against the whole and competing efforts.

5. The next meeting will be in Room 2E08 at 0900 Wednesday, February 26th. The subject will be retrieval techniques and hardware used in the process. To prepare the panel members in part, a copy of the continental code (initial digit in the line segment number) overlaying the Map Library area code is attached.

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Attachment